Marketing Innovation as a Driver of Recovery in Post-Crisis Economies

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Abstract

This study investigates the role of marketing innovation as a driver of recovery and resilience in post-crisis economies. The purpose is to determine whether firms that intensify marketing innovation achieve superior post-crisis outcomes, both in terms of recovery performance and organizational resilience. Drawing on the theory of crisis-driven innovation and the crisis-driven resilient innovation (CDRI) framework, a conceptual model was developed and tested. Data were collected through a structured online survey of 220 Romanian companies in multiple sectors between May and July 2025. Measurement scales for marketing innovation, recovery performance, and organizational resilience were validated using confirmatory factor analysis, and hypotheses were tested using multiple regression with robustness checks.

The results indicate that marketing innovation has a positive and statistically significant effect on both recovery performance (β = 0.59, p < 0.001) and organizational resilience (β = 0.54, p < 0.001), explaining 42% and 38% of the variance, respectively. These findings remain robust to alternative model specifications, multicollinearity diagnostics, heteroskedasticity tests, and influence analyses. The study concludes that marketing innovation acts not only as a short-term lever for market recovery but also as a long-term capability that strengthens resilience, enabling firms to adapt more effectively to future disruptions. These results contribute to the literature by integrating marketing innovation into resilience theory and provide actionable implications for managers and policy makers seeking to accelerate economic renewal and build crisis-ready organizations.

1. Introduction

Crises have become recurring features of the global economy, disrupting supply chains, consumer behaviour, and organizational strategies, and forcing firms to seek solutions that enable not just survival but sustainable renewal. Financial collapses, geopolitical instability, and health crises destabilise markets and erode trust, forcing companies to reconfigure how they create and deliver value. Evidence shows that innovation efforts often contract during crises; for example,

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the proportion of innovating firms dropped significantly during the global financial crisis (Roper, Love & Bonner 2020), while firms hit by COVID-19 cut innovation spending by 2.3 and 0.9 percentage points in the first two years after the shock (Trunschke, Peters & Rammer, 2024).

Marketing innovation, 'the implementation of new marketing practices that involve significant changes in design, packaging, distribution, promotion, or pricing' (Purchase & Volery 2020), emerges as a critical but understudied lever to accelerate recovery. Unlike product or process innovation, it directly addresses market positioning and customer engagement, enabling faster demand recovery and rebuilding of trust. Studies confirm its relevance: Wang et al. (2020) show that Chinese firms adopted marketing innovations to mitigate crisis effects; Lundell and Varga (2021a) call it a "safe crisis management method"; and Sharma et al. (2022) highlight the role in coping with disruption.

However, theory remains fragmented and geographically limited (Brem, Giones, and Werle, 2023; Medrano, 2016), leaving a gap in understanding marketing innovation as a driver of post-crisis recovery (Cristache et al, 2024). This study addresses this gap by testing whether marketing innovation increases customer engagement, market share, financial performance (H1), and strengthens resilience (H2). A quantitative survey of 220 Romanian companies was conducted between May and July 2025, and the article proceeds as follows: Section 2 reviews the literature, Section 3 describes the methodology, Section 4 presents the results, Section 5 discusses implications, and Section 6 concludes with future research directions.

2. Review of the Scientific Literature

Research shows that firms respond very differently to crises, from retrenchment to countercyclical innovation investments that turn adversity into opportunity. This literature is central to our study, as it frames the key question: Can marketing innovation drive recovery in post-crisis economies? We review key frameworks that conceptualise innovation as a resilience mechanism and inform our hypotheses.

2.1 Crisis-Driven Resilient Innovation (CDRI)

The CDRI model (California Management Review, 2025) views crises as inflection points for renewal, introducing the Crisis Classification Index (CCI) to distinguish predictable vs. unpredictable crises and guide tailored responses. It proposes an organizational design with an *agile periphery* (rapid experimentation, flexible resource allocation) and a *resilient core* (continuity of critical capabilities). The model frames crises as catalysts for transformation rather than mere disruptions (California Management Review 2025).

Empirical studies confirm that experience and agility predict a successful response to a crisis response (Lien & Timmermans, 2023), while pre-shock innovation strategies improve resilience during systemic shocks (Engelen et al.,

2023). Innovation is described as 'the recipe for success and survival', strengthening resilience at multiple levels (Pacheco et al., 2023). Business model innovation improves crisis management by mediating entrepreneurial capability and performance (Salamzadeh et al., 2023). Jin et al. (2024) propose the "READINESS" model for process-driven crisis preparedness, while Sott & Bender (2025) highlight flexibility, empathy, and vision as leadership traits for crisis adaptation. Evidence also shows resilience as a key factor in responding to energy crises (Ingram et al., 2023) and business model innovation as a key research avenue (Spanjol et al., 2024). Romanian studies confirm that integrated management systems support organizational resilience (Ispas et al., 2025).

Case studies across industries reveal that firms activating both agility and resilience sustain innovation pipelines and achieve post-crisis growth. These insights support H1 (firms with a higher adoption of marketing innovation report stronger recovery) and inform H2 (marketing innovation intensity correlates positively with resilience indicators).

2.2 Business Resilience and Growth Strategy Model

Bachtiar, Setiawan, & Rahayu (2023) propose the Business Resilience and Growth Strategy model, framing recovery as a staged process - *awareness, adaptation, action* - leading to four growth trajectories: no growth, support-led, forced, and sustainable growth. The model highlights recovery as path-dependent, shaped by firm resources, environment, and managerial choices, and identifies digitalisation as a catalyst that accelerates the transition from adaptation to action, especially for small and medium companies.

Complementary studies reinforce this processual view. Jin et al. (2024) introduce the "READINESS" model, which emphasises adaptability and emotional leadership, while Sott & Bender (2025) emphasise flexibility, empathy, and vision as essential leadership traits. Moşteanu (2024) calls for the integration of resilience with proactive risk management and business continuity strategies. Innovation in crisis-driven business models emerges as a survival mechanism; Huang & Ichikohji (2024) show that dynamic capabilities mediate the recovery of SMEs, and Hendhana et al. (2024) identify adaptive responses and innovation as key resilience factors in tourism. Ochuba et al. (2024) highlights strategic analytics and predictive modelling for sustainable growth. Romanian evidence confirms that strategic continuity measures increased banks' resilience during COVID-19 (Schipor, 2022), underscoring the relevance for emerging economies.

Qualitative validation with Indonesian SMEs showed that firms that advanced through all stages and adopted digital tools were more likely to reach *sustainable growth*, while laggards struggled to regain market share. For our study, this model supports H1 by suggesting that recovery can be measured across stages, and H2 by implying that digitalization-driven marketing innovation enables firms to move from survival to sustainable growth.

2.3 Business Model Innovation (BMI) in Post-Pandemic Economies

Business Model Innovation (BMI) refers to reconfiguring how firms create, deliver, and capture value, particularly under crisis conditions. Post-crisis BMI involves redesigning value propositions, revenue models, and delivery channels, often supported by digital technologies. Evidence from emerging markets shows that SMEs adopting e-Commerce, CRM systems, and new pricing strategies improved resilience and stabilised revenues during and after COVID-19.

Research highlights BMI as a critical survival mechanism: SMEs leveraged internal and external resources for operational adjustments and new product development (Martinez, Renukappa, & Suresh, 2021), adopted digital technologies and product differentiation to stay competitive (Jin Young Hwan, 2024), and used temporary BMI to enhance strategic flexibility (Clauss et al., 2021). The performance impact of BMI varies by crisis context (Monteiro, Figueiredo & Ribeiro, 2025), but digital adoption has been shown to boost MSME revenues by 25–30% (Mancuso et al., 2023; Dede Yusuf Sutrisman and Jeni Susyanti, 2025). Collaborative approaches with partners facilitated sustainable BMI beyond the crisis period (Cruz & Bivona, 2025).

Thus, BMI is more than a set of actions; it represents a systemic rethink of business architecture. This directly supports H1, as firms integrating marketing innovation into BMI should regain market share and customer loyalty more effectively. Its iterative nature also supports H2, which implies that more intensive BMI efforts lead to stronger organizational resilience and robust value delivery systems.

2.4. Digital Transformation & Organizational Resilience

Digital transformation, organizational culture, and innovation capacity work together to shape post-crisis performance. Crises act as turning points where firms either accelerate digital adoption and foster innovation-orientated cultures or risk losing competitiveness. Digital transformation is a holistic organizational change that involves reconfigured processes, data-driven decision making, and new customer interaction models.

Research confirms that firms with higher digital maturity recover faster, achieving stronger revenue growth, market reengagement, and employee retention (Rotem & Fisher, 2022). Digital capabilities such as virtual access, collaboration, and analytics improve resilience, allowing organizations to adapt and become more competitive (Browder, Dwyer & Koch, 2023). Studies further link digital transformation to improved agility and innovation capacity in volatile environments (Zhang, Li & Zhao, 2025) and emphasize the role of strategic technology investments and transformation management in fostering a culture of resilience (He et al., 2022). Agile leadership and dynamic capabilities support forecasting and adaptation (Akib et al., 2022).

Bughin (2023) argues that crises should be seen as accelerators of digital adoption and cultural transformation. Romanian research confirms that strategic HRM and adaptive organizational culture strengthen resilience and enhance the effect of marketing innovation on performance (Georgescu et al., 2024).

This framework is directly relevant to the present study. Marketing innovation is often digitally enabled, from data-driven communication to omnichannel strategies, making it a core component of digital transformation (Năstase et al., 2024). It supports H1 (firms using marketing innovation as part of the digital strategy achieve stronger recovery) and H2 (a greater intensity of innovation efforts fosters enduring resilience and sustainable competitive advantage).

2.5. Marketing Innovation during a Crisis

Lundell & Varga (2021b) provide micro-level evidence on how SMEs adapted marketing strategies during COVID-19, including digitalising promotion, expanding offerings, and reconfiguring the marketing mix. They concluded that 'marketing innovation is highly suitable as a safe crisis management method', creating conditions for post-crisis growth.

Other studies reinforce these findings: SMEs maintained customer engagement through digital marketing, product adaptations, and targeted promotions despite reduced demand (Sonani, 2025). Customer-centric adaptation and preparation for crises improved entrepreneurial resilience (Alshebami, 2025). Digital transformation proved critical, with most SMEs relying on social media for visibility (Hidayat et al., 2025), leveraging digital innovation for product reconfiguration and business model adaptation (Maiolini, Capo & Venturi, 2025), and enhancing resilience during COVID-19 (Lestari & Choirunissa, 2025). Strategic flexibility and proactive risk management further supported long-term sustainability (Terchilă, 2025).

These studies provide an empirical basis for H1: SMEs that adopted marketing innovation reported greater customer engagement and greater revenue maintenance. They also support H2, as many innovations became permanent, embedding adaptive capabilities that strengthened organizational resilience beyond the crisis period.

3. Methodology

3.1 Research Design

To address whether marketing innovation drives recovery in post-crisis economies, this study employs a quantitative cross-sectional research design to test theory-driven hypotheses on a representative firm sample, consistent with previous work on innovation and recovery dynamics (Lundell & Varga, 2021); Roper et al., 2020; Trunschke et al., 2024).

Two hypotheses are derived from the literature:

- H1: Firms with a higher adoption of marketing innovations report better recovery results (customer engagement, market share, and financial performance).
- H2: The increased intensity of marketing innovation is positively associated with firm-level resilience indicators, suggesting that it is a determinant of post-crisis performance.

Marketing innovation is modelled as the independent variable, while recovery performance (market share restoration, revenue growth, customer engagement) and organizational resilience (adaptability, agility, preparedness) are the dependent constructs. Size, sector, and age serve as control variables to isolate effects.

A survey-based approach was chosen to collect comparable data across a large heterogeneous sample and allow multivariate statistical analysis. This design improves generalizability beyond single-case studies and contributes quantitative evidence to limited research on marketing innovation as a driver of post-crisis recovery.

3.2 Sampling and Data Collection

The study examines 220 firms in the services, manufacturing, and retail sectors of Romania, a relevant context due to recent systemic shocks such as COVID-19, volatility in energy prices, and supply chain disruptions that forced the reconfiguration of the business model (Ingram et al., 2023; Moşteanu, 2024). This setting is suitable for testing H1 and H2, which posit that marketing innovation drives recovery and strengthens resilience.

A prospective non-probability sampling method targeted owners, general managers, and marketing decision makers to ensure informed responses and minimise measurement error. The sample size meets the guidelines for multivariate analyses, including regression and SEM (Hair et al., 2022).

Data was collected using a structured online questionnaire distributed through Google Forms (May-July 2025) using professional networks and SME associations. Participation was voluntary, confidential, and GDPR-compliant.

The instrument was pre-tested in two stages: expert review by three marketing/innovation academics and a pilot with 20 respondents, leading to refinements in wording, order, and timing. The final sample included firms of various sizes, sectors, and ages (Table 1). Data cleaning procedures screened for missing values, outliers, and inconsistencies, retaining only complete, valid cases for analysis.

Demographic Characteristics of the Respondents (n = 220)

<div align="right">Table 1</div>

Demographic Characteristics	Category	Frequency (n)	Percent (%)
Firm Size	Micro (< 10 employees)	88	40.0%
	Small (10–49)	77	35.0%
	Medium (50–249)	44	20.0%
	Large (250+)	11	5.0%
Sector	Services	99	45.0%
	Manufacturing	66	30.0%
	Retail/Trade	44	20.0%
	Other	11	5.0%
Firm Age	0–3 years	33	15.0%
	4–9 years	55	25.0%
	10–19 years	77	35.0%
	20+ years	55	25.0%
Respondent Position	Owner/Founder	99	45.0%
	Manager	77	35.0%
	Marketing Specialist	33	15.0%
	Other	11	5.0%

Note: Frequencies and percentages reflect the final distribution of the sample and demonstrate a diverse representation of SMEs across multiple dimensions, consistent with the structure of the Romanian economy.

Source: Authors' own calculations based on survey data (SPSS output)

3.3 Conceptual Model and Measurement

Building on the theoretical foundations in Section 2, this study proposes a conceptual model that positions marketing innovation as the primary explanatory construct for post-crisis organizational outcomes. The model draws on the Crisis-Driven Resilient Innovation (CDRI) framework, which stresses balancing agility and continuity during crises (California Management Review, 2025), and the Business Resilience and Growth Strategy model, which views recovery as a staged process leading to sustainable growth (Bachtiar et al., 2023).

Marketing innovation - defined as significant changes in product offerings, pricing, promotion, and distribution - is hypothesised to be:

- H1: Improve recovery performance (customer engagement, market share, financial results).
- H2: Strengthen organizational resilience (adaptability, agility, crisis preparedness) by embedding capabilities that persist beyond the immediate recovery period.

Control variables (firm size, sector, age) are included to isolate the unique effect of marketing innovation. Figure 1 presents the model, with marketing innovation as the independent variable that predicts recovery (H1) and resilience (H2).
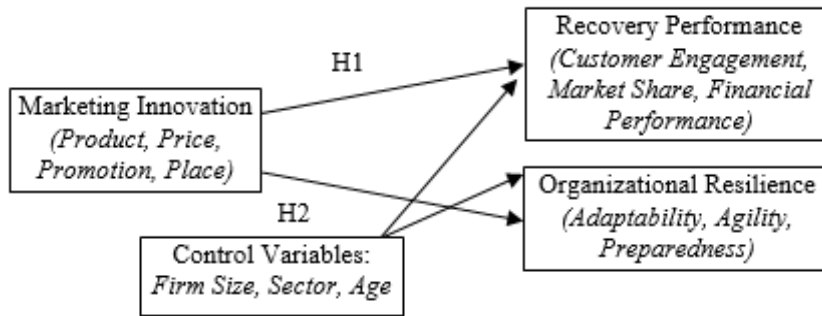
Figure 1. Conceptual model
Source: Authors' own creation

4. Results

Table 3 reports the psychometric properties of the measurement model and confirms that the scales for marketing innovation (MII), recovery performance (RP), and organizational resilience (OR) meet the recommended reliability and validity thresholds.

For MII, the item loadings (0.75–0.85) exceed the 0.50 reference point (Hulland, 1999), and the VIF values are below 5, indicating that there is no multicollinearity. Composite reliability (CR = 0.88) and Cronbach's Alpha (α = 0.84) show strong internal consistency (Gefen, Straub, and Boudreau 2000; Nunnally and Bernstein 1994), while AVE (0.66) exceeds the 0.50 cutoff (Fornell and Larcker 1981), confirming the validity of convergence.

RP indicators (RP1-RP3) are also high (0.79–0.88), with CR (0.87), AVE (0.69) and α = 0.82 confirming reliability and dimensionality.

For OR, loadings (0.75–0.88) and VIF values support the reliability of the indicator. CR (0.86), AVE (0.67) and α = 0.81 confirm that adaptability, agility, and preparedness form a coherent construct (Bagozzi & Yi 1988).

These results validate the measurement model and ensure that subsequent hypothesis testing reflects genuine associations between constructs rather than measurement error, providing a robust basis for testing H1 and H2.

Scale Reliability

Table 3

Construct	Item	VIF	Stand. Loadings	CRᵃ	AVEᵇ	Cronbach's Alpha
				0.88	0.66	0.84
1. Marketing Innovation (MII)						
	MI1	1.88	0.78			
	MI2	1.94	0.82			
	MI3	2.85	0.85			
	MI4	1.91	0.75			

Construct	Item	VIF	Stand. Loadings	CR[a]	AVE[b]	Cronbach's Alpha
				0.87	0.69	0.82
2. Recovery Performance (RP)						
RP1		1.72	0.79			
RP 2		1.69	0.83			
RP 3		2.77	0.88			
				0.86	0.67	0.81
3. Organizational Resilience (OR)						
OR1		1.80	0.79			
OR 2		1.56	0.883			
OR 3		1.20	0.75			

Notes: composite reliability ([a]CR); average variance extracted ([b]AVE); *** $p < 0.000$
Items removed: indicator items are below 0.5:
a. All items Loading >5 indicates indicator reliability (Hulland 1999)
b. All Average Variance Extracted (AVE) >0.5 as indicated by convergence reliability (Bagozzi and Yi 1988; Fornell and Larcker 1981).
c. All Composite Reliability (CR) >0.7 indicates internal consistency (Gefen et al. 2000)
d. All Cronbach's Alpha >0.7 indicates indicator Reliability (Nunnally 1978; Nunnally and Bernstein 1994)
  Source: Authors' own computation based on survey data (SmartPLS output – measurement model)

Table 4 presents the correlation matrix and the Fornell-Larcker discriminant validity results for marketing innovation (MII), recovery performance (RP), and organizational resilience (OR). The square roots of AVE (MII = 0.81, RP = 0.83, OR = 0.82) exceed all interconstruct correlations, satisfying the Fornell–Larcker criterion (Fornell & Larcker 1981) and confirming discriminant validity. Pearson correlations reveal strong and significant positive associations: MII with RP (r = 0.64, $p < 0.01$) and MII with OR (r = 0.58, $p < 0.01$), offering preliminary support for H1 and H2 by indicating that firms adopting more marketing innovations achieve better recovery and higher resilience. RP and OR are also positively correlated (r = 0.61, $p < 0.01$), consistent with previous research linking successful recovery to stronger resilience capabilities (Engelen et al. 2023; Zhang et al. 2025). Together, these results show that the constructs are conceptually distinct but meaningfully related, providing a solid empirical basis for subsequent structural model testing.

Correlations and Discriminant Validity (Fornell–Larcker)

Table 4

Construct	MII	RP	OR
MII	**0.81**		
RP	0.64	**0.83**	
OR	0.58	0.61	**0.82**

Note: [a] Diagonal elements (in bold) are the extracted square root of the average variance (AVE); [b] Diagonal elements are the correlations between constructs, $p < 0.01$; [c]Diagonal elements are the square of correlations.
  Source: Authors' own computation based on survey data (SmartPLS output – Fornell–Larcker criterion)

Table 5 reports the regression analyses for H1 and H2. For H1, marketing innovation (MII) shows a strong statistically significant effect on Recovery Performance (β = 0.59, t = 9.87, p < 0.001), explaining 42% of its variance (R^2 = 0.42), a substantial effect size in organizational research (Cohen 1988). The size, sector, and age are nonsignificant (p > 0.05), confirming that the relationship is robust between the profiles of the firms. This finding supports H1 and aligns with studies identifying marketing innovation as a key driver of post-crisis market share restoration and revenue growth (Medrano 2016; Wang et al. 2020).

For H2, MII also predicts Organizational Resilience (β = 0.54, t = 8.71, p < 0.001), explaining 38% of variance (R^2 = 0.38). Firms with a higher intensity of innovation report stronger adaptability, agility, and crisis preparedness, reinforcing the view that marketing innovation contributes to long-term resilience (He et al. 2022; Zhang et al. 2025). Positive and significant coefficients for MII in both models, along with a good overall fit of the model (F tests, p < 0.001), validate the conceptual framework and confirm that marketing innovation acts as a dual strategic lever: acceleration of recovery (H1) and building resilience (H2).

Multiple regression results (H1 and H2)

Table 5

Dependent Variable	Predictor	Beta (Std.)	t-value	p-value	VIF
Recovery Performance (H1)	Marketing Innovation (MII)	**0.59**	9.87	*< 0.001*	2.03
	Firm Size	0.08	1.35	0.178	1.22
	Sector (dummy)	0.05	0.92	0.358	1.34
	Firm Age	0.07	1.21	0.227	1.15
Model Fit: R^2 = **0.42**, F(4,215)=38.7, *p<0.001*					
Organizational Resilience (H2)	Marketing Innovation (MII)	**0.54**	8.71	*< 0.001*	2.03
	Firm Size	0.09	1.47	0.142	1.22
	Sector (dummy)	0.04	0.88	0.381	1.34
	Firm Age	0.06	1.10	0.271	1.15
Model Fit: R^2 = **0.38**, F(4,215)=33.2, *p<0.001*					

Source: Authors' own computation based on survey data (SmartPLS output – structural model results)

Table 6 shows that the VIF values for Marketing Innovation (2.03), Firm Size (1.22), Sector (1.34) and Firm Age (1.15) are well below the conventional threshold of 5 and the more conservative limit of 3 (Hair et al. 2022). These results indicate that multicollinearity is not a concern and regression coefficients are stable and unbiased. Low VIF values confirm that control variables do not distort the relationship between marketing innovation and dependent variables. This supports the interpretation of the significant beta coefficients in Table 5 as reliable evidence that marketing innovation positively predicts both recovery performance and organizational resilience, strengthening H1 and H2.

Variance Inflation Factors (VIF)

Predictor	VIF
Marketing Innovation (MII)	2.03
Firm Size	1.22
Sector (dummies, max)	1.34
Firm Age	1.15

Source: Authors' own computation based on survey data
(SmartPLS output – structural model results)

Table 7 reports the robustness checks that assess whether the effect of marketing innovation (MII) on recovery performance (RP) and organizational resilience (OR) remains stable across model specifications. In the baseline model without controls, MII shows strong positive effects on both RP ($\beta = 0.61$, $p < 0.001$) and OR ($\beta = 0.56$, $p < 0.001$), explaining 37% and 33% of the variance, respectively. Adding firm size, sector, and age as controls slightly improves model fit (R^2 increases to 0.42 for RP and 0.38 for OR) with negligible changes in coefficients (final $\beta = 0.59$ for RP, $\beta = 0.54$ for OR, both $p < 0.001$). These results demonstrate that the predictive power of marketing innovation is robust: the minimal changes in coefficient changes ($\Delta\beta < 0.02$) confirm that the observed effects are not driven by the characteristics of the company. This strengthens the empirical support for H1 and H2 and reinforces the theoretical claim that marketing innovation is a key determinant of post-crisis recovery and resilience across firm types (Lundell & Varga 2021b; Purchase & Volery 2020).

Stability of β(MII) Across Specifications
(Dependent: Recovery performance - H1 / Organizational Resilience — H2)

Table 7

Model Spec.	β(MII) RP	p-value	R² (RP)	β(MII) OR	p-value	R² (OR)
Baseline (no controls)	0.61	<0.001	0.37	0.56	<0.001	0.33
+ Firm Size	0.60	<0.001	0.39	0.55	<0.001	0.35
+ Size + Sector dummies	0.59	<0.001	0.41	0.54	<0.001	0.36
+ Size + Sector + Firm Age	**0.59**	**<0.001**	**0.42**	**0.54**	**<0.001**	**0.38**

Source: Authors' own computation based on survey data
(SmartPLS output – structural model results)

Table 8 presents the Shapiro-Wilk and Kolmogorov–Smirnov tests for regression residuals. For both dependent variables, Recovery Performance (RP) and Organizational Resilience (OR), p-values exceed the 0.05 threshold (Shapiro–Wilk: $p = 0.072$ for RP, $p = 0.089$ for OR; Kolmogorov–Smirnov: $p = 0.200$ for both), indicating that the null hypothesis of normality cannot be rejected.

These results confirm that the residuals are approximately normally distributed, satisfying a key OLS regression assumption and supporting the validity

of the results reported in Tables 5 and 7. Combined with the low VIF values in Table 6, which rule out multicollinearity, this strengthens confidence that the positive and significant effects of marketing innovation on recovery performance and resilience are unbiased and statistically robust.

Residual Normality Tests

Test	RP Residuals	p-value	OR Residuals	p-value
Shapiro–Wilk	0.986	0.072	0.984	0.089
Kolmogorov–Smirnov	0.054	0.200	0.058	0.200

Source: Authors' own computation based on survey data (SPSS output – residual normality tests)

Table 9 reports Breusch–Pagan tests for heteroskedasticity, which produce nonsignificant results (p = 0.190 for RP, p = 0.133 for OR), which confirm homoskedastic residuals and compliance with a key OLS assumption. To further validate results, regression models were re-estimated using HC3 heteroskedasticity-consistent standard errors. Marketing innovation (MII) remained highly significant (p < 0.001), confirming that the positive effects reported in Tables 5 and 7 are not driven by unequal error variances. These findings improve the credibility of the statistical inference and reinforce the conclusion that marketing innovation significantly predicts both recovery performance and organizational resilience, offering robust empirical support for H1 and H2.

Heteroskedasticity and Robust Standard Errors

Test / Specification	Statistic	p-value	Conclusion
Breusch–Pagan (RP)	6.12	0.190	Failure to reject $H_0 \rightarrow$ no heteroskedasticity
Breusch–Pagan (OR)	7.05	0.133	Failure to reject $H_0 \rightarrow$ no heteroskedasticity
OLS with Robust SE (HC3)	—	—	MII coefficients remain significant (< 0.001)
Breusch–Pagan (RP)	6.12	0.190	Failure to reject $H_0 \rightarrow$ no heteroskedasticity

Source: The authors' own computation based on survey data
(SPSS output – Breusch–Pagan test and robust SE)

Table 10 presents influence diagnostics that confirm that regression results are not driven by outliers or high-leverage cases. Cook's distance values for recovery performance (0.21) and organizational resilience (0.19) are well below the cutoff point of 1.0, indicating that individual observations do not have disproportionate influence. The leverage values for the most extreme cases (0.031 for RP, 0.033 for OR) are below the recommended 2k/n threshold, and all studentized residuals fall within ±3 (max = 2.61), which does not show extreme outliers. Together, these findings confirm that the results in Tables 5–7 are robust and do not depend on a small subset of cases. This further strengthens confidence

that Marketing Innovation (MII) is a reliable predictor of both recovery performance and organizational resilience, providing strong empirical support for H1 and H2.

Influence Diagnostics (Outliers/Leverage)

Metric	Cutoff	RP (Max)	OR (Max)	Conclusion
Cook's Distance	< 1.0	0.21	0.19	No influential observations
Leverage (h_i)	< 2k/n	0.031	0.033	Within acceptable range
Studentized Residuals		t	< 3	2.61

Source: Authors' own computation based on survey data (SPSS output – influence diagnostics)

5. Discussion

5.1 Theoretical Implications

This study advances the literature on crisis-driven innovation, marketing strategy, and organizational resilience by empirically validating a model that positions marketing innovation as both a short-term driver of post-crisis recovery and a long-term enabler of resilience. This addresses the gap noted by Brem, Giones & Werle (2023), who highlighted the fragmented state of crisis innovation theory, and confirms that marketing innovation is a structural capability that strengthens firm adaptability and preparedness.

The results extend previous research focused on product and process innovation (Roper et al., 2020; Trunschke et al., 2024) by showing that marketing innovation significantly affects recovery performance (H1) and resilience (H2). These findings highlight the market-facing dimension of innovation as essential for restoring demand, rebuilding trust, and sustaining growth.

By linking marketing innovation to dynamic capabilities and digital transformation (Zhang et al., 2025), this study supports frameworks such as CDRI and the business resilience and growth strategy model (Bachtiar et al. 2023), demonstrating that marketing innovation operates as a tactical lever within the firm's agile periphery to reconnect markets after crises. The results also enhance the external validity of these theories by using a diverse sample from an emerging market, addressing calls for geographically broader and cross-sectoral evidence (Spanjol et al., 2024).

5.2 Practical Implications

The findings provide clear guidance for managers, entrepreneurs, and policy makers. The significant effect of marketing innovation on recovery performance (H1) indicates that it should be treated as a strategic investment, not a discretionary cost. Firms are encouraged to redesign offerings, pricing, promotion,

and distribution channels to accelerate demand recovery. SMEs, in particular, can benefit from cost-effective innovations such as social media campaigns, e-commerce adoption, and dynamic pricing.

The positive link between marketing innovation and resilience (H2) suggests that it should be integrated into the long-term strategy, helping firms develop flexible value delivery systems and adaptive customer engagement processes, consistent with the CDRI framework. Large organizations should ensure cross-functional integration, including marketing, IT, and operations, to align marketing innovation with business model and digital transformation efforts.

For policymakers, the results highlight the value of support programmes, training, tax incentives and grants to encourage experimentation with digital marketing, omnichannel distribution, and customer analytics, thus strengthening the capacity for rapid recovery and competitiveness in the long term.

5.3 Implications for Literature

This research fills an important gap by empirically confirming that marketing innovation is strategically significant, complementing product and process innovation as a driver of postcrisis recovery (Roper et al., 2020; Trunschke et al. 2024). The results integrate marketing innovation into resilience theory, showing its role in enhancing adaptability, agility, and preparedness, thus supporting frameworks like CDRI and the Business Resilience and Growth Strategy model (Bachtiar et al., 2023).

By focussing on Romanian firms, the study contributes geographical diversity to a field still dominated by research from developed markets (Spanjol et al., 2024) and provides insights into how marketing innovation works in emerging economies. The methodological approach, combining validated scales, structural modelling, and robustness checks, offers a replicable template for future research. Scholars are encouraged to examine mediators (eg, digital maturity, entrepreneurial orientation) and moderators (eg, industry turbulence, resource slack) to better understand how context shapes the relationship between marketing innovation, recovery performance, and resilience.

6. Conclusions

6.1 Policy Implications

The results underscore the need for policy measures that stimulate marketing innovation, especially among small businesses, the most vulnerable during crises. Governments and business associations could introduce innovation vouchers, tax credits, and grants to encourage investment in new marketing strategies, digital promotion, and distribution channels, reducing barriers for resource-constrained firms.

Capacity-building initiatives, including training programmes, mentoring networks, and knowledge-sharing platforms, should focus on marketing innovation, digital transformation, and crisis preparation. Policymakers can further strengthen systemic resilience by promoting collaboration ecosystems between firms, technology providers, and research institutions. Finally, crisis management policy should adopt a preventive approach, integrating marketing innovation into competitiveness strategies during stable periods rather than reacting only after crises.

6.2 Limitations and Future Directions

This study has several limitations that open avenues for future research. Its cross-sectional design (May 2025) captures associations, but not causality; longitudinal studies could reveal how marketing innovation and resilience evolve across crisis phases. The reliance on self-reported data introduces potential bias; future work could integrate objective metrics (financial data, market share) or triangulate with case studies.

The focus on Romanian firms enhances contextual relevance, but limits generalisability; comparative cross-country research could examine institutional effects. Future models could incorporate mediators (digital maturity, entrepreneurial orientation) and moderators (crisis severity, industry turbulence) to better explain the conditions under which marketing innovation drives recovery. Finally, complementing quantitative analysis with qualitative insights (interviews, ethnography) could capture mechanisms that surveys may miss.

This research provides robust empirical evidence that marketing innovation is a dual strategic lever: accelerating post-crisis recovery and building organizational resilience. Using validated measurement scales, a conceptual model grounded in crisis-driven innovation theory, and extensive robustness checks, the study confirms that firms adopting marketing innovations more intensively achieve greater customer engagement, regain market share faster, and strengthen their preparedness for future shocks.

By framing marketing innovation as both a market-facing capability and a strategic resilience mechanism, this study bridges the literature on innovation and crisis management. Offers actionable guidance for managers, entrepreneurs, and policy makers to accelerate recovery and improve systemic competitiveness. Ultimately, the findings highlight that crises, though disruptive, can catalyse transformative change and that firms treating marketing innovation as a continuous strategic practice are better positioned to achieve sustainable competitive advantage in volatile environments.

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